BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Paul Yaswen	Staff Scientist
eRA COMMONS USER NAME P_Yaswen	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Tufts U., Medford, MA	B.Sc.	1980	Biology
Brown U. Providence, RI	Ph.D.	1984	Cell & Mol. Biology

A. Positions and Honors

Professional Experience:

1981-1982 Graduate Teaching Assistant, Division of Biology and Medicine, Brown University
1985-1987 Research Fellow, Dept. of Cancer Genetics, Dana-Farber Cancer Inst., Harvard Medical School
1987-1988 NRSA Fellow, Dept. of Cancer Genetics, Dana-Farber Cancer Institute, Harvard Medical School
1988-1990 NRSA Fellow, Dept. of Cell and Molecular Biology, Lawrence Berkeley National Laboratory, University of California
1990-present Staff Scientist, Life Sciences Division, Lawrence Berkeley National Laboratory, University of California
1998-present Member, UCSF Comprehensive Cancer Center

Professional Service:

Instructor – National Breast Cancer Coalition Project LEAD 1996-1999
Ad hoc member, Pathology C Study Section, NIH, Center for Scientific Review 2001
Ad hoc member, Cancer Mol. Pathobiology Study Section, NIH, Center for Scientific Review 2002
Co-Chair - Senescence & Immortalization Minisymposium, AACR Ann. Mtg. Orlando, FL 2004
Member, Molecular Oncology Study Section, NIH, Center for Scientific Review 2005-present

Awards:

1980, University Fellowship, Brown University; 1983, NIH Predoctoral Traineeship; 1987, NRSA Postdoctoral Fellowship

B. Selected peer-reviewed publications (from 52 total)

Yaswen, P., Hayner, N.T., and Fausto, N. (1984) Isolation of oval cells by centrifugal elutriation and comparison with other cell types purified from normal and preneoplastic livers. Cancer Res. 44: 324-331.

Yaswen, P., Goyette, M., Shank, P., and Fausto, N. (1985) Oncogene mRNA levels in specific liver cell types during liver carcinogenesis. Mol. Cell. Biol. 5: 780-786.

Yaswen, P., Thompson, N.L., and Fausto, N. (1985) Oncodevelopmental expression of rat placental alkaline phosphatase. Amer. J. Pathol. 121: 505-513.

Yaswen, P., Smoll, A., Peehl, D., Trask, D.K., Sager, R., and Stampfer, M.R. (1990) Downregulation of a novel calmodulin-related gene during transformation of human mammary epithelial cells. Proc. Natl. Acad. Sci. USA 87: 7360-7364.

Yaswen, P., Hosoda, J., Parry, G., Smoll, A., and Stampfer, M. Protein product of a human intronless calmodulin-like gene shows tissue-specific expression and reduced abundance in transformed cells. Cell Growth and Diff., 3: 335-345, 1992.

Yaswen, P., Stampfer, M.R., Ghosh, K., and Cohen, J.S. Effects of sequence of thioated oligonucleotides on cultured human mammary epithelial cells. Antisense Research and Development 3: 67-77, 1993.

Stampfer, M.R., Pan, C.-H., Hosoda, J., Bartholomew, J., Mendelsohn, J., and Yaswen, P. Blockage of EGF receptor signal transduction causes reversible arrest of normal and immortal human mammary epithelial cells with synchronous reentry into the cell cycle. Exp. Cell Res. 208: 175-188, 1993.

Edman, C.F., George, S.E., Means, A.R., Schulman, H., and Yaswen, P. Selective activation and inhibition of calmodulin dependent enzymes by a calmodulin-like protein found in human epithelial cells. Eur. J. Biochem. 226: 725-730, 1994.

Sandhu, C., Garbe, J., Bhattacharya, N., Daksis, J., Pan, C-H., Yaswen, P., Koh, J., Slingerland, J.M., and Stampfer, M.R. TGF-β stabilizes $p15^{INK4B}$ protein, increases $p15^{INK4B}$/cdk4 complexes and inhibits cyclin D1/cdk4 association in human mammary epithelial cells. Mol. Cell Biol. 17:2458-2467, 1997.

Stampfer, M.R., Bodnar, A., Garbe, J., Wong, M., Pan, A., Villeponteau, B., and Yaswen, P. Gradual phenotypic conversion associated with immortalization of cultured human mammary epithelial cells. Mol. Biol. Cell 8:2391-2405, 1997.

Close, M.J., Howlett, A.R., Roskelley, C.D., Desprez, P.Y., Bailey, N., Rowning, B., Teng, C.T., Stampfer, M.R., and Yaswen, P. Lactoferrin expression in mammary epithelial cells is mediated by changes in cell shape and actin cytoskeleton. J. Cell Science 110:2861-2871, 1997.

Collins, C., Rommens, J.M., Kowbel, D., Godfrey, T., Tanner, M.,Hwang, S., Polikoff, D., Nonet, G., Cochran, J., Myambo, K., Jay, K.E., Froula, J., Cloutier, T., Kuo, W-L., Yaswen, P., *et al.* Positional cloning of ZNF217 and NABC1: Genes amplified at 20q13.2 and overexpressed in breast carcinoma. Proc. Natl. Acad. Sci. USA 95:8703-8708, 1998.

Garbe, J., Wong, M., Wigington, D., Yaswen, P., and Stampfer, M.R. Viral oncogenes accelerate conversion to immortality of cultured human mammary epithelial cells. Oncogene 18: 2169-2180, 1999.

Nijjar, T., Wigington, D., Garbe, J., Waha, A., Stampfer, M.R., and Yaswen, P. $p57^{KIP2}$ expression and loss of heterozygosity during immortal conversion of cultured human mammary epithelial cells. Cancer Res. 59:5112-5118, 1999.

Kim, D.W., Sovak, M.A., Zanieski, G., Nonet, G., Romieu-Mourez, R., Lau, A.W., Hafer, L.J., Yaswen, P., Stampfer, M., Rogers, A.E., Russo, J., and Sonenshein, G.E. Activation of NF-κB/Rel occurs early during neoplastic transformation of mammary cells. Carcinogenesis 21: 871-879, 2000.

Stampfer, M.R, Yaswen, P. Culture models of human mammary epithelial cell transformation, J. Mam. Gland Bio. Neo. 5: 27-40, 2000.

Nonet, G.H., Stampfer, M.R., Chin, K., Gray, J.W., Collins, C.C., and Yaswen, P. The *ZNF217* Gene amplified in breast cancers promotes immortalization of human mammary epithelial cells. Cancer Res. 61: 1250-1254, 2001.

Stampfer, M.R., Garbe, J., Levine, G., Lichtsteiner, S., Vasserot, A.P., and Yaswen, P. hTERT expression can induce resistance to TGF growth inhibition in $p16^{INK4A}$(-) human mammary epithelial cells. Proc. Nat. Acad. Sci. (USA), 98: 4498-4503, 2001.

Yaswen, P. and Stampfer, M. Epigenetic changes accompanying human mammary epithelial cell immortalization. J. Mam. Gland Bio. Neo. 6: 223-234, 2001.

Stampfer, M.R. and Yaswen, P. Immortal transformation and telomerase reactivation of human mammary epithelial cells in culture, in: Advances in Cell Aging and Gerontology: Telomerase, Aging and Disease (M. Mattson and T. Pandita, eds.) Elsevier, Amsterdam, 103-130, 2001.

Kaminker, P.G., Kim, S-H., Taylor, R.D., Zebarjadian, Y., Funk, W.D., Morin, G.B., Yaswen, P., and Campisi, J. TANK2, a new TRF1-associated PARP, causes rapid induction of cell death upon overexpression. J. Biol. Chem., 276: 35891-35899, 2001.

Yaswen, P. and Stampfer, M.R. Molecular changes accompanying senescence and immortalization of cultured human mammary epithelial cells. Int. J. Biochem. Cell Biol., 34 1382–1394, 2002.

Olsen, C.L., Gardie, B., Yaswen, P., and Stampfer, M.R. Raf-1-induced growth arrest in human mammary epithelial cells is p16-independent and is overcome in immortal cells during conversion. Oncogene 21: 6328 – 6339, 2002.

Stampfer, M.R. and Yaswen, P. Human epithelial cell immortalization as a step in carcinogenesis. Cancer Lett. 194, 199-208, 2003.

Stampfer, M.R., Garbe, J., Nijjar, T., Wigington, D., Swisshelm, K., and Yaswen, P. Loss of p53 function accelerates acquisition of telomerase activity in indefinite lifespan human mammary epithelial cell lines. Oncogene, 22: 5238-5251, 2003.

Beauséjour, C.M., Krtolica, A., Galimi, F., Narita, M., Lowe, S.W., Yaswen, P. and Campisi, J. Reversibility of human cellular senescence: Roles of the p53 and p16 pathways. EMBO J. 22: 4212-4222, 2003.

Chin, K., Ortiz de Solorzano, C., Knowles, D., Jones, A., Chou, W., Garcia Rodriguez, E., Kuo, W-L. Ljung, B-M., Chew, K., Garbe, J., Myambo, K., Krig, S., Stampfer, M., Yaswen, P., Gray, J.W., and Lockett, S.J. *In situ* analyses of genome instability in breast cancer. Nature Gen. 36: 984-988, 2004.

Rodier, F., Kim, S-H., Nijjar, T., Yaswen, P., and Campisi, J. Cancer and aging: The importance of telomeres in genome maintenance. Int. J. Biochem. Cell Biol.: 37: 977-990, 2005.

Nijjar, T., Bassett, E., Garbe, J., Takenaka,Y., Stampfer, M.R., Gilley, D., Yaswen, P. Accumulation and altered localization of telomere-associated protein TRF2 in immortally transformed and tumor-derived human breast cells. Oncogene 24:3369-3376, 2005.

Huang, G., Krig, S., Kowbel, D., Xu, H., Hyun, B., Volik, S., Feuerstein, B., Mills, G.B., Stokoe, D., Yaswen, P., and Collins, C. ZNF217 suppresses cell death associated with chemotherapy and telomere dysfunction. Hum Mol Genet. 14:3219-25, 2005.

Fournier, M., Martin, K.J., Xhaja, K., Bosch, I., Yaswen, P., and Bissell, M.J., Gene expression signature in organized and growth arrested mammary acini predicts good outcome in breast cancer. Cancer Res. 66:7095-102, 2006.

Quinlan, K.G.R., Nardini, M., Verger, A., Francescato, P., Yaswen, P., Corda, D., Bolognesi, M., and Crossley, M. Specific recognition of ZNF217 and other zinc-finger proteins at a surface groove of CtBPs. Mol. Cell Biol.: 26:8159-72, 2006.

Yaswen, P. and Campisi, J. Oncogene-induced senescence pathways weave an intricate tapestry. Cell 128:233-4, 2007.

Krig, S.R., Jin, V.X., Bieda, M.C., O'geen, H., Yaswen, P., Green, R., and Farnham, P.J. Identification of genes directly regulated by the oncogene ZNF217 using ChIP-chip assays. J. Biol. Chem. 282:9703-12, 2007.

Beliveau, A., Bassett, E., Lo, A.T., Garbe, J., Rubio, M.A., Bissell, M.J., Campisi, J., and Yaswen, P. p53-dependent integration of telomere and growth factor deprivation signals. Proc. Nat. Acad. Sci. (USA), 104:4431-6, 2007.

Quinlan, K., Verger, A., Yaswen, P., and Crossley, M. Amplification of zinc Finger gene 217 (ZNF217) and cancer: when good fingers go bad. Biochim Biophys Acta. 1775:333-40, 2007.

Beliveau, A. and Yaswen, P. Soothing the watchman: telomerase reduces the p53-dependent cellular stress response. Cell Cycle: 6:1284-7, 2007.

C. Research Support

ONGOING

NSCOR#NNA04CF751 (Barcellos-Hoff, M.H.) 10/01/03-09/30/08
National Aeronautics and Space Administration
Mechanisms of HZE Damage and Repair in Human Epithelial Cells
The goal of this project is to determine using state-of-the-art imaging, genomic, and genetic tools, which dose and radiation quality, under what cellular and microenvironment circumstances, affect normal epithelial cell behavior associated with cancer risk.

1 U01 ES012801-01 (Hiatt, Robert A.) 04/01/04-07/31/10
National Institute of Environmental Health Sciences Subcontract to LBNL from UCSF
Breast Cancer and the Environment Research Center
The goal of this project is to test the hypotheses that environmental agents that increase breast cancer risk alter both mammary epithelial and stromal cell phenotypes. Characterizations at the molecular, cellular, and organ system level using state-of-the-art imaging, proteomic and genetic tools will be used to determine when, which and how environmental insults regulate cell behavior in the mouse mammary gland during development in vivo, and in conversion of human mammary epithelial cells to premalignant phenotypes.

U54 CA112970-01 (Gray, Joe) 9/30/04-9/29/09
National Cancer Inst./NIH
Systems-Based Predictions of Responses to Cancer Therapy
The central goal of this project is to develop and experimentally validate a computational model of cancer-related signaling networks that can be used to identify subsets of patients that will respond to pathway-targeted therapeutics.

RECENTLY COMPLETED

DAMDW81XWH-04-1-0283 (Yaswen, Paul) 04/01/04-03/31/08
Department of Defense Breast Cancer Research Program
Functional Analysis of BORIS, A Novel DNA-binding Protein
Recently, a gene, BORIS, was identified which maps to the 20q13.2 region frequently amplified in breast and other cancers. BORIS bears extensive similarity to CTCF, a multi-functional chromatin binding protein. The goal of this project was to examine BORIS expression and function in human mammary epithelial cells.

DE AC03 76SF00098 (Barcellos-Hoff, M.H./Yaswen, Paul) 10/01/03-05/31/07
Department of Energy
Multidimensional Analysis of Human Epithelial Cell Response to Low Dose Radiation
In this project, a consortium of DOE-funded LBNL investigators studied responses to low-dose radiation using a physiologically relevant three-dimensional human epithelial cell model.

BC030946 (Stampfer, Martha R./Yaswen, Paul) 06/01/04-06/30/07
Department of Defense Breast Cancer Research Program
Regulation of hTERT Expression & Function in Newly Immortalized p53(+) Human Mammary Epithelial Cell Lines
This project studied how p53 regulates telomerase expression in immortalized human mammary epithelial cells.